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EDITED BY DR. ANDREW WILSON, F.R.S.E. &c.

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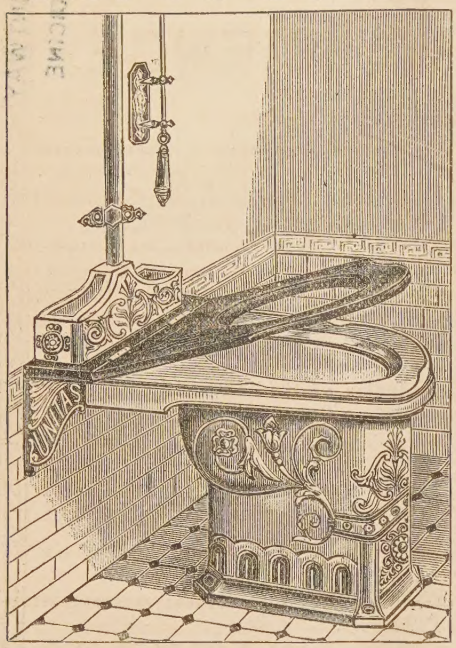

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◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, NOVEMBER* 4, 1887.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

DR. J. WALKER DOWNIE has recently contributed some interesting particulars in the course of an article in the *Practitioner*, on dryness of the throat from excessive tea-drinking. He says—"In my capacity of surgeon to the throat department of two public institutions in Glasgow, I have made several observations bearing on this subject, and that principally at the Throat Dispensary in connection with Anderson's College. The bulk of the patients seen there belong to that class which may be termed 'the very poor,' along with a number of the lower class factory hands."

✣ ✣ ✣

THREE years ago he there pointed out to some of the students a form of dry throat occurring in badly-fed anæmic women, which he then in great part ascribed to the excessive use of cheap, and therefore inferior, tea. On inquiry it was found that those women had tea with almost every morsel of food of which they partook, and the tea, of a rank order, was not simply infused, but literally *stewed*. For a time, in addition to prescribing the use of tea (recommending the substitution of cocoa or milk), he advised the liberal use of farinaceous food with milk, and prescribed an iron tonic, under which the patients rapidly recovered.

AFTER a time he gave no medicine whatever, directing the change of diet indicated alone, with the same beneficial results. Patients, Dr. Downie adds, are never thoroughly satisfied unless they get "a bottle"; and as preparations of iron materially assist in the cure of the accompanying want of bodily tone, he returned to his former prescription. Those patients, when asked if they use much tea, confess to it freely, but add that since the throat became so dry they have quite lost taste for it—have "turned against it."

✣ ✣ ✣

IN all such cases, Dr. Downie regards the dryness of throat as in great measure due to the stomach-derangement—the dyspepsia—induced by the constant use of stewed tea shortly before, with, or immediately after meals, as well as to the local effect on the throat itself of this frequently-applied astringent and irritant lotion. And just as we forbid the use of tobacco in certain inflammatory conditions of the mouth and throat, so the total abstinence from tea should in all such cases be rigorously enjoined.

✣ ✣ ✣

THE above observations offer a new argument against the use of tea by the poor, and by those who are not overburdened with money to spend upon food. When one reflects, moreover, upon the quality of the tea used by the poor, and upon the fact of the tea being, as Dr. Downie puts it, "stewed," and allowed to give up its tannin and astringent properties to the infusion, we may cease to wonder that dry throats should supervene where such a solution has been applied continuously to the mouth membrane. By the way, would not such a tea-solution be of some service in the treatment of certain forms of sore throat?

✣ ✣ ✣

A CORRESPONDENT of *Nature* seeks the opinion of scientists and others on the following interesting circumstance: A female child, quick and intelligent, when about fifteen months old, learned to repeat the alphabet, shortly afterwards the numerals, days of the week, month, &c., and subsequently scraps of nursery rhymes, English and German, then to spell words of two and three letters. All this was learned readily, eagerly indeed, and for a time she remembered apparently every word acquired, indelibly. At about two years old, further teaching was for a time remitted, as she was observed to be repeating audibly in her sleep what she had learned during the day.

✣ ✣ ✣

SUBSEQUENTLY, tuition was resumed under a governess; but she had not only forgotten much of what she had previously known perfectly, but learns far less readily

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than formerly. She is now about three and a half years old, in perfect good health and spirits, quick, and particularly observant, but the capacity for learning by rote is materially diminished. She is remarkably imitative, but shows no faculty whatever for writing, and as little for music. The writer would like to hear of any parallel cases, and what the ultimate development has been, with any opinions upon the cause of their appearances.

Sir Spencer Wells, the famous surgeon, was entertained at a grand banquet on a recent occasion by some of the leading surgeons and Professors of Austria-Hungary and by a deputation of the younger surgeons and students. Only one toast was given—that of "The Guest of the Evening." It was proposed by Professor Breisky, who said that he and many others present were indebted to the teaching of Sir Spencer Wells for much of their success. Replying to this toast, Sir Spencer Wells spoke of the changes which have taken place in surgery during the last thirty-five years, and of the great results accomplished by wise sanitary legislation. "If," he said, "we had in England full power, a competent Minister of Public Health, and an efficient staff of health officers and engineers, the present death-rate of London—that is 19 in 1,000—might certainly be reduced to 14, or probably to 12." Sir Spencer Wells' remarks may be commended as worthy the notice of our Government.

I have recently had brought under my notice a highly useful invention for the cure of stooping habits, in the young especially, in the shape of a patent "Epaulet Brace," made by Messrs. Mackintosh & Co., of Bank-street, Sinclairtown, Kirkcaldy, N.B. This brace is constructed on sensible principles, and aims at correcting stooping habits by drawing the shoulders backwards, while avoiding injurious chest-pressure, and obviating all strain. I recommend this appliance—one feature of which is its entire simplicity—to all who may stand in need of chest-expansion as a necessary condition of health.

The cause and determination of sex have always formed matters of intricate physiological discussion. I note that Dr. Kisch, of Prague, has reviewed former theories on this subject, and found in 1972 births, 1023 males and 949 females. His results do not agree entirely with those of Hofacker and Sadler. Kisch found when the man was older than the woman from one to five years 294 male to 283 female children were born; when the disparity in ages was from six to ten years, 327 males to 306 females were born; eleven to fifteen years, 190 to 167.

Sixteen years or more in difference of ages between man and wife showed 138 males to 113 females; when ages were equal, 34 males to 42 females were born. When the woman was older than the man, 40 males and 38 females were born. When the man was older than the woman, and the woman's age was between 15 and 19, 280 male to 287 female children were produced; when the mother's age was between 20 and 25, 595 males and 513 females; when between 26 and 32, 74 males and 69 females.

The observer concludes that when a man is at least ten years older than the woman, and the woman is at the age of greatest reproductive activity (20 to 25), more male children than female are born. When man and woman are of equal age, female children predominate. Women when older than their husbands produce more male children, but not an excess.

Original Essays

"Life is not to live, but to be well."—*Martial.*

POISONS FROM ANIMALS.

By Guy C. Rothery.

SECOND PAPER.

Vital Alkaloids, or Leucomaines.

Great advance had been made in the study of animal alkaloids before it actually occurred to anyone that these dangerous poisons could be found in the human economy outside the range of active bacterial or germ-fermentation. It was understood, and generally admitted, that the putrefaction caused the production of certain more or less clearly defined cadaveric alkaloids, fixed or volatile. But for a long time discovery and conjecture was arrested at this point. To M. Gautier belongs the honour of first venturing out of the beaten track. It was his remarkable "Mémoire" which first startled the scientific world by showing that animal alkaloids were not merely the production of fermentation—bacterial action on putrefying tissues—but might originate from the normal activity and growth of the living animal organisms. This was a distinct chemico-physiological discovery of the first importance. It did not remain long unconfirmed. Here, indeed, was food for speculation; a wide horizon opened to thought and research. The admission that the bacterides at work on dead animal matter naturally generated alkaline bases, was already a great stride in science. But here we were asked to consider a question of far greater moment. And yet, rightly comprehended, it was the natural sequence of the first discovery.

Armand Gautier first understood the matter, and groped on bravely in the dark and laborious path of bio-chemics. Early in the day he discovered that our tissues belonged to two orders of life. The greater part lived aerobically, the lesser anaerobically.* This seemed to point out distinctly to different modes of life and chemical action; and yet alkaloids were discovered in all parts of the human economy. He felt he was on the high road to a grand discovery, and he persevered. The result was that alkaloids were actually found in, and satisfactorily separated from, fresh animal tissues. The first experiments were conducted with fresh meats, muscular tissues more especially, which were hashed and subjected to partial digestion in warm water. This solution was then filtered, and the tissues treated with boiling alcohol and other agents. By this method M. Gautier obtained three new alkaloids from muscular tissues, viz., *amphicreatinine*, *crusocreatinine* and *pseudoxanthine*. These are all crystallizable, and closely resemble each other. The urine was next under close examination, and yielded various alkaline bases.

If we inquire into the question, we find the presence of alkaloids everywhere. Sir William Aitken briefly

* In the proportions of about five to one.

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resumes Dr. Brown's remarks on the unclassified group of leucomaines in these words :—

"From the urine.—A uride—*allontoine*—and a base—*karnine*—already known. A second alkaloid has been discovered with the formula C^7 H^{14} N^4 O^2.

"From the blood and important viscera.—Alkaloids have been met with in appreciable quantities.

"From the spleen.—M. Morel, of Lille, has obtained an alkaloid isolated in diliquescent crystals.

"From the intestines.—A base which seems to belong to the pyridic group, isolated from choleraic dejections.

"From the saliva.—Gautier has determined the existence of an alkaloid in human saliva.

"From the venoms of certain snakes and bactrachians (frogs) as well as from certain mollusca and fishes Breiger has identified an active principle in the *mytiloxin*, and given its formula as C^6 H^{15} N O^2."

All of these alkaloids are highly poisonous, and when used in injections by the skin prove fatal to the smaller animals. Human saliva indisposing cats, and the separated alkaloid killing dogs. Alkaloids of a very powerful nature have also been detected in the muscular and nervous systems. In the brain it is constantly present in the shape of *neurine*, and is actually formed by the mere exertion of thought. Of course, its presence in undue quantities endangers the mental powers and the bodily well-being.*

Although chemists have endeavoured to draw a hard and fast line between the cadaveric and vital alkaloids (the ptomaines and leucomaines) as they endeavoured to do between the bases of animal and vegetable origin, they are now obliged to admit that this cannot be done. Dr. Brown says "It is to this *savant* (Gautier) that we are chiefly indebted for the examination separately of alkaloids formed during bacterial destruction of albumenoids, and of those which owe their formation to the chemical activities of normal tissues. This distinction is useful, and lends itself to the requirements of methodical classification. But does it follow that the terms Ptomaines and Leucomaines should be considered absolutely distinct, and, as it were, opposed to one another? This is not admissible. It is in vain, in many cases, our trying to rigorously trace the limits where the one series of alkaloids begins or the other terminates." This is a sample of the difficulties which surround investigations. But it is at once highly interesting, as showing the endless chain connecting life with death, and important in its physiological and pathological aspects.

From the nature of these substances and the turn his studies had to take, M. Gautier was able to determine that these alkaloids were normally elaborated in the living body at the expense of the proteids, or the albumenoids. Their presence was not merely due to accident. On the contrary, their production is the natural outcome of life, which Dr. Brown describes as "the incessant mutation of organic elements and tissues." Our tissues, the bricks and mortar of our bodies, are continually undergoing change; they die, are eliminated by the blood and secretory organs, and are continually replaced by the blood, principally through the capillaries, which convey along their stream the elements for replacing the effete. This process of change is carried on unceasingly, and, as may be well understood, not without considerable chemical transformations. It is during these transformations that the alkaloids are formed internally, either aerobically, often by the micro-germs, or anaerobically, by fermentation. The reason of the presence of these alkaloids in the animal economy we are gradually ascertaining, but of the harm they may do we have ampler evidence. Under ordinary circumstances, however, these self-generated toxic bases are got rid of by the same law of mutation which brings them into being. With the effete, or dead, elements, the blood hurries off to the various outlets for useless animal matter—the kidneys, liver, lungs, skin, &c.—the alkaline poisons, and these are thrown out with the other useless materials, or actually consumed by combustion in contact with the blood. Hence their presence in urines, fœces, and other excretions. This elimination is a normal condition of healthy vitality. Let some abnormal phenomena appear, the congestion of an organ for instance, and the elimination is partially or totally stopped, the regular process absolutely constituting life is altered, and the health impaired. Again, by over-exertion, or exhaustion, the normal destruction of the albumenoid and muscular tissue elements is hastened; and if this increase rises above a certain point, or continues too long, the organs of elimination become unable to compete with the over-strain, the dead tissue elements, alkaloid, and others, are not consumed or excreted with sufficient rapidity, and their accumulation ends by health turning to disease.

Now, it has been sufficiently well proved that this change from health to disease, which may be rapid or slow or almost imperceptible, is not merely due to local derangement of organs, but to actual auto-intoxication by poisonous alkaloids, over-abundantly formed or insufficiently eliminated.

It may be as well to explain the words auto-intoxication. It is a term employed to denote spontaneously generated disease, arising from self-contamination or poisoning. Many diseases may be due to self or auto-intoxication, ranging from brain-fever or permanent insanity to consumption. The term is modified to auto-infection when the disease contracted is an infectious one—of the nature of typhus or typhoid, and perhaps even cholera.

Bouchard, the celebrated French toxicologist, has experimented with alkaloids obtained from human (healthy) fœces, killing rabbits with it. He further proves, by elaborate and careful calculations, based on actual observations, that the alkaloids formed in the intes-

* See my article, "Insanity by Auto-Intoxication," in the *Provincial Medical Journal.*

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tines of a healthy man in twenty-four hours would be quite sufficient to kill him if they were absorbed and excretion stopped. When the functions of the kidneys are impaired, and secretion arrested, we absorb uric and other poisons, and thereby contract urœmia by auto-intoxication. Indigestion stops the due elimination of intestinal alkaloids, and we are poisoned more or less seriously. A phenomenon in disease which Bouchard terms *stercorœmia*.

With regard to the uric alkaloids, it is highly interesting to note that their chemical nature and physiological effects differ greatly according to the state of health; and Bouchard also discovers a remarkable difference between night and day urines: a state of affairs due, without doubt, to the altered conditions under which the secretions are made; the difference in the activity of the animal economy producing an equally wide divergence in the character of the secretions. This question of uric poisoning, alkaloidal or otherwise, is a vast one, fraught with much importance to mankind. It is a problem which was dimly guessed at by our forefathers, to whom the half-charlatan urine doctors were familiar. Moliére passed over the hesitating *savant* trembling on the brink of a great discovery, to laugh pitilessly at the practitioner with his phial, spectacles, and learned phraseology; doubtless he was justified in doing so, and yet how near were even these charlatans in their blind gropings, too often devoid of all real insight, to a great physiological truth! So true is it that human knowledge, like Nature herself, never proceeds by leaps.

M. Peter, in his clinical exposition of the discoveries of Selmi and Gautier, makes very similar remarks with regard to the new departure in bio-chemics and the discarded humoralism. In these same clinical lectures he has given several instances of auto-intoxication and infection. A noteable and typical case was that of a young man who, having been brought into hospital in a serious condition, was declared by the learned Chomel to be suffering either from typhoid or incipient smallpox. During the night, matters improved, rest and quiet nearly restored him, and the alarming symptoms soon disappeared. It transpired that this young fellow had performed a long journey on foot under most painful and exhausting conditions. He had broken down, tired out, and in a feverish state, little removed from actual typhoid or typhus. Had the exertion continued, or the rest been withheld, he would probably have fallen a victim to one or other of these dread diseases. Other examples have been observed. And here we have vividly brought before us the way in which so-called army typhus—more correctly fatigue-fever — is contracted. Indeed, Sir William Aitken tells us that Professor Angelo Mosso, of Turin, has carried his observations in this quarter to such a degree of perfection as to enable him to declare himself ready to "formulate regulations as to the amount of exertion to be put forth on the march, as to the best distribution of halts and sleep, and as to the lightening of the weight which each soldier has to carry." A practical application of this curious phase of the question.

The human brain is a sensitive organ, though possessing an astonishing vitality under many trying circumstances. As we have already said, the mere act of thought, putting the molecules of the brain mass into activity, gives rise to an alkaloid, the highly poisonous *neurine;* when this leucomaine is not eliminated it does much harm. Here we are at once put into possession of a fact enabling us to understand at a glance why brain work is so much more exhausting than hard manual labour. We are also able to appreciate the dangers of an imprudent use of our faculties, how necessary it is to regulate and watch over their employment. This becomes all the more evident when we deal with youthful scholars, whose enforced bodily inactivity, in close rooms, predisposes to functional derangement, and thus if the brain is over-taxed, or worked too long, this physiological law asserts itself and prostrates the child—symptoms to which delicate and ill-fed children are peculiarly liable. Here, again, is another hard fact, one worthy the consideration of our schoolmasters, and our wonderfully, if fearfully, contrived educational machinery. For, if we bear within us the constant, ever active means of disease and death, let us not forget that nature has also provided us with the means of averting such dangers. Is this not sufficient to make us ponder over those words of Dr. Brown, already quoted in our first article, on the possible result of inoculations? Organic matter preserves its activity under most trying circumstances, and the possible mischiefs as an outcome of this activity are incalculable.

The adoption of this doctrine of auto-intoxication by animal alkaloidal poisons and unclassified extractives may mean a partial return to the humoralism of our ancestors; but neither Dr. Brown, MM. Gautier and Peter, nor Sir William Aitken see any harm in this return to a discarded system, returning to it, as we do, with increased knowledge, and seeing our way out of formal dogmatic theorizing.

Here, however, we have no room for doubt—we are not asked to examine theories, but to investigate facts, and confirm actual and demonstrable discoveries. Dr. A. M. Brown, we hold, is right when he says, "We are also justified in holding that there are in pathology morbid series of ailments as legitimate as those natural series of things with which we are familiar in chemistry, geology, palæontology, or botany. Variation and gradation are the rule in Nature, alike in pathology as in any other departments of natural science; and in recognizing the fact that the 'animal alkaloids' can be elaborated by the spontaneous physiological processes of life, I am once more brought to the conclusion I attempted to expound two years ago, namely: that in facts such as I have detailed in these pages we have additional evidence that 'the doctrine of Evolution is capable of explaining the origin of some diseases.'"

Such teaching naturally points to the setting aside of much that is overdone and extravagant in the "germ pathology," but by no means the uprooting of the doctrine completely, as some seem to suppose. On this head Sir William Aitken says: "To hunt for new forms of 'microbes' is comparatively easy and, perhaps, an exciting form of 'sport'; but to determine the presence, the nature, the physiological effects, and the place in pathology of the *ptomaines*, the *leucomaines*, and the *extractives* is a far more difficult (if it is a less exciting) investigation, because of the tedious and prolonged chemical processes that are required, and the subsequent experiments on the products." Dr. Brown is careful to point out the importance of micro-germs, their particular and evident relation to animal alkaloids, while protesting against the attempt to raise the bacilli into the specific and positive cause of disease.

We have attempted in these brief papers to place before our readers a just and comprehensive review of the important field in bio-chemics which has been so freshly opened to investigation. It is not merely a question interesting to medical men and specialists, but one of those subjects, such as the circulation of the blood, which must appeal to all intellectual beings.

CANNIBALISM FROM AN ECONOMIC POINT OF VIEW.

By Brigade-Surgeon W. Curran.

FIFTH PAPER.

Anxious, then, to make this little essay as complete as I could, and having exhausted all my own limited resources in the inquiry, I wrote to a well-known pathological chemist of my acquaintance on the subject, and his reply is subjoined. The points I put to him were simply these—(*a*) as to the analysis or relative composition of human and other mammalian flesh, and (*b*) as to their relative nutritional flavour and value; and he writes to the effect that he would be glad to aid me in this pursuit, but that he is unable to do so, as he is not aware that the subject has ever yet been even treated of. "Human flesh is," he continues, "so difficult to study, because it cannot easily be obtained in a healthy or fresh state. What is known about it you will probably find in Hermann's 'Physiology,' in Liebig, or, better, in Konig's 'Work on Foods' (2nd Ed.)"; and he winds up by saying that "the chemistry of muscle is very backward indeed."

Such is truly the case, and all I can find in Hermann on the point amounts to this, viz., that "oxygen, hydrogen, carbon, nitrogen, sulphur, phosphorus, chlorine, fluorine silicon, &c., enter into the composition of the human body." In other words, it is constituted, so far as chemistry knows, of the same materials as go to build up the body of the hog or the ox, as above; and, for the rest, I will here subjoin the latest pronouncement on the matter I am acquainted withal, and leave that to speak for me and itself.

Summary of the Quantitive Composition of Muscle.

In the following table, which is quoted from Hofmann,* the average amounts of the various constituents in 1,000 of the muscles of vertebrates is given. — From Professor Gamgee's "Physiological Chemistry," Vol. I., page 339.

	Mammals.	Birds.	Cold-blooded Animals.
Solid constituents in 1,000	217—255	227—282	200
Water ,, ,, ,,	745—783	717—773	800
Organic matters ,, ,,	208—245	217—263	180—190
Inorganic ,, ,, ,,	9—10	10—19	10—20
Coagulated albumin. Sarcolemma, nuclei, vessels	145—167	150—177	(?)
Alkaline albuminate	28·5—30·1		
Creatine	2·0	3·4	2·3
Xanthine and hypoxanthine	0·2		
Taurine	0·7 horse	0·0	1·1
Inosit	0·03		
Glycogen	4·1—5·0		30—50
Lactic acid	0·4—0·7		
Phosphoric acid	3·4—4·8		
Potash	3·0—3·9		
Soda	0·4—0·43		
Lime	0·16—0·18		
Magnesia	0·4—0·41		
Sodium chloride	0·04—0·1		
Oxide of iron	0·03—0·1		

If, now, coming for a moment to the application of these several facts or considerations, we ask ourselves how we are to utilize or apply them, I say that, setting aside prejudice and sentiment, the answer would depend on the circumstances of the hour as well as on the physical requirements of the general economic situation. If, as Mr. George contends, and as I heartily believe, "pauperism, crime, insanity, and suicides are increasing amongst us," there must be, ere long, such a change in all our economic relations as will rescue the masses of every country "from that insufficient nourishment, those squalid lodgings, and unwholesome and monotonous occupations" that now oppress or madden the very poor. How this change is to be brought about without bloodshed, seems to me to be, *au fond*, the question of the hour. I submit one solution of it; it is for other and abler individuals to improve upon or qualify this; and the fact, the indisputable fact, that the use—the habitual use—of this article as a food has engendered, in those who indulged in it for any time, such a liking for it as that they could only be withheld from it by force, seems to me to warrant, or, at least, suggest, one more trial of it.

Statisticians tell us that our population is doubling itself every sixty years, and Mr. Wallace has lately assured us that 4,500,000 persons in this country alone are always on the verge of pauperism or worse. We learn, on the other hand, from a great or even a greater authority than he, that "a child will make two dishes at an entertainment for friends, and when the family dines alone, the fore or hind quarter will make a reasonable dish, especially in winter"; and the same writer intimates—I know not if he has proved the point or otherwise—that "a well-grown, fat, yearly child would make, when roasted whole, a considerable figure at a Lord Mayor's feast." A Cabinet Minister has lately assured us that one of his Government's objects in strengthening our navy was to safe-guard our food supplies, and we know that vast quantities of corn, flesh, and other eatables of that kind are annually imported into this country from abroad.

We know, also, that many diseases, human, as well as bovine, equine, &c., have been traced to the use of this foreign food. But we never hear of such dangerous entities as pleuro-pneumonia, tape-worm, trichinosis, or tubercle among professed cannibals. They are, indeed, as all travellers testify, a sturdy and vigorous race, whose wives are endowed with a fertility that is withheld from their more civilized congeners, who derive much of their bravery from eating the hearts of their enemies, and who are, at times, "capable of the most generous sentiments." Whether they owe these properties to this habit or to the fact that they are not restricted, as so many of us are, to the use of salt junk, American pork, or German sausages, I am now unable to say. I only know that our Free Trade policy has not *quite* settled the question of our food supplies, and that he who can reduce the price of the penny loaf or put a bigger piece of beef or bacon into the kitchen pot will be the hero of the hour as well as the man of the people.

Altogether, and though our gorge might rise against the practice at first, we would, I think, in time settle down quietly to it. The churches have not, so far as I know, ever formally condemned it, and as to the Dismal Science, it ought, I should think, speed it on with its benison. For there is no doubt as to the economies it might effect in families. Cremationists, burial-boards, coffin-clubs, and sanitary associations would find in it an equitable solution of all their difficulties. It would even save the bishops some of those perplexities they

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* Hofmann, "Lehrbuch der Loochemie," p. 104.†

† This is Dr. Foster's estimate of the general composition of human muscle, and he adds further on that "the animal body may be regarded as a mixture of proteids, carbo-hydrates, and fat, in association with smaller quantities of various saline and other crystalline bodies."

Water		744·5
Solids—		
Myosin and other matters that are insoluble in water	155·4	
Soluble proteids	19·3	
Gelatine	20·7	
Extractive and salts	37·1	
Fats		255·5

now experience in respect of cemeteries and consecrations, and as to the undertaker and his sable *entourage*, they might be wiped out of the account altogether.

Let us only educate the masses in the way they should eat, and then having secured the sanction of the House, we might at least make a beginning—on the babies. All I and others of my way of thinking want is a fair field and no favour. And assuredly a substance that has ministered to the wants or maintained the strength of our earliest sires, and that our more unsophisticated brethren use on occasion or preferentially to this day everywhere, ought not to be "banned and barred forbidden fare" in an island which owes so much to the sea, and whose shores may any day be closed against those supplies from abroad, on which not only the health and vigour, but also the lives and liberties of her inhabitants, now so largely or entirely depend.

THE Voluntary Early Closing Movement *versus* Compulsory Closing is the title of a useful little pamphlet by "An Old Bristol Shopkeeper." It is published by Mr. Thatcher, Bookseller, Bristol, and is a powerful plea for increased means of recreation and health-acquirement among shopkeepers and assistants. The author writes feelingly, and has evidently at heart the highest good of the class he writes for. The pamphlet should be widely read.

THE Singer Manufacturing Company have received the following highly commendatory notice:—"Adelaide Jubilee Exhibition, 1887.—Office of the Agent-General for South Australia, 8, Victoria Chambers, Victoria-street, S.W., London, 24th October, 1887.—Sir,—I have the pleasure of informing you that a communication has been received from Adelaide stating that you have been awarded the First Order of Merit for your exhibit of Family Sewing Machines, Button-Hole Sewing Machines, Eyelet Sewing Machines, Carpet Sewing Machines, and Leather Sewing Machines, at the Adelaide Jubilee Exhibition. Your most obedient servant, (signed) ARTHUR BLYTH, Agent-General." This latest award bears testimony to the continued excellence of the Singer Manufactures, which occupy as heretofore the first rank in the lists of sewing machines.

MAGAZINES OF THE MONTH.—*Harper's Magazine* for November is an interesting number, while its illustrations are even above the average of this artistic periodical. "A Santa Barbara Holiday" and "The Other End of the Hemisphere" are among the most interesting contents. "The Editor's Drawer," as usual, is bright, chatty, and entertaining. Messrs. Cassell & Co.'s serials, *The Family Physician*, *Countries of the World*, and *Illustrated History of England*, continue their educative work, and present a royal road to instruction. *The Season* for November keeps its high place as the lady's illustrated magazine of dress and fashion, and contains much information likely to be serviceable to the fair sex. *Belgravia* and *The Gentleman's Magazine* for November also present us with a combination of excellent literary matter, comprising healthy fiction, and more stable intellectual fare as well.

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Personal Health

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With health all taste of pleasure flies."—*Gay.*

EATING.

IT is altogether too common a fault to regard the stomach, the lungs, and perhaps some other organs as pre-eminent, and to give little thought to that circulating mass of cells and fluid called the blood. The "old women" talk of the blood, but the young Æsculapians of the lungs or stomach first. The one are in quest of "blood purifiers," the others of drugs with a special affinity for certain parts. True, this is human nature, and good naturedly let us say it is all right! None the less, though, have we here food for reflection, and sometimes from the most simple considerations important deductions may be drawn.

Setting aside the matter of taste and appetite, and asking, "Why do we eat?" it is answered, "That we may replenish the blood." When we eat, the food is taken into the blood; when we breathe, it is that the air inhaled may play the same part with the blood (circulating within filmy walls) that air plays in maintaining the light of a candle or a gas-jet. But, some one may say, we take the food into the *stomach*, and *that* is the main thing. We answer, the first place the food goes to in the system is the blood, for in the stomach it is no more in the system than a glove in a lady's muff is in the interior of the muff. As the food passes to the stomach on its way to the blood, it is acted on by various secretions, which simply dilute or hydrate it, reducing it to simpler construction, so that it is easily strained through the stomach-walls into the circulation. This is what is called digestion, and that part of it which the stomach is unable to perform is accomplished in the intestine beyond.

Is not all the food, then, digested by the stomach? Not a bit of it. Starches are digested by the saliva, albumens (as meat, &c.) by the stomach, and both these and fats by the intestine. This digestion is merely a process of simplification of the food, and is absolutely on the same lines as cooking, and if the cooking were protracted long enough the result would be the same if it were digested.

If people were taught to consider before eating whether they really wanted to put this or that into their blood, there might be less gluttony and wine-bibbing in the world, and fewer systems heavily charged with nicotine from tobacco fumes. If people would consider what a task the digestion of food imposes upon the digestive organs, there would be more folks properly masticating instead of bolting their meals. What are the teeth for, but to chew the food? Through long ages have they been adapted to the work of chewing, and the myriad dentists, and people early toothless, bespeak how the teeth are being deprived of their function.

It is a strange thing that in the bursting of a seed (as wheat, barley, &c.) into life about the first step is one of digestion; and it is equally noteworthy that this digestion is accomplished by digestive ferments of precisely the same action as those met with in all animals. If, for example, we add a tablespoonful of Kepler's Malt Extract to a plate of warm gruel, it will liquefy it the same as will saliva, and so we are able to utilize this ferment in cases where there is imperfect digestion of starch with great advantage. Plants (especially insect-eaters) possess a ferment also, which acts like that in the gastric juice,

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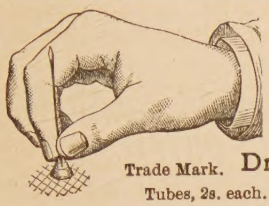

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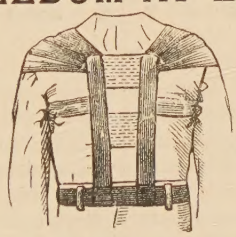

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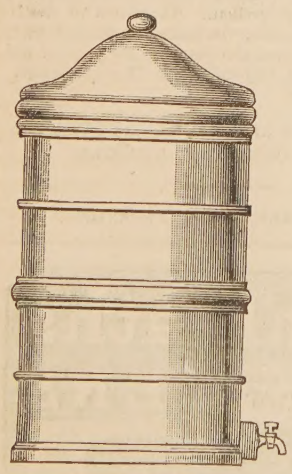

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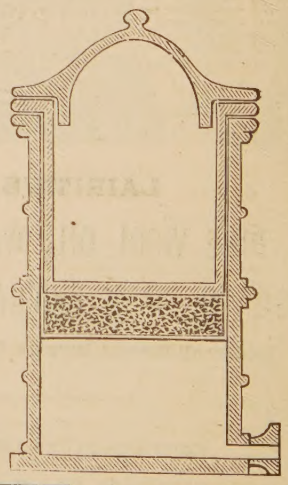

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CHLOROFORM: A WARNING.

Some four years ago I suffered considerable anxiety. I had bought some railway shares at a very low price; my broker told me that I had "only got to lock up the stuff and sit down upon it; all I had to do was not to be in too great a hurry to take my profits." I followed his advice; but my stock went lower and lower, and, as it was a non-dividend-paying one, I found myself in straits. During the day it didn't trouble me much; but all night long I used to lie and think about my losses. As things got worse my sleeplessness increased. Of course, I know it couldn't actually have been so; but it seemed to me that I hadn't slept at all for a fortnight, and then I had an addition to my troubles in a smart attack of face-ache. So I went to my dentist, who looked into my mouth and said, "There is nothing I can do for you; but I can relieve the pain at night, and give you a few comfortable hours' rest, at all events." I jumped at the suggestion. "If you were not a personal friend of mine," the dentist went on to say, "I shouldn't do this; it's horribly unprofessional, you know." Then he took a little bottle, and with a small glass measure he carefully meted out the dose. "There are thirty drops of pure chloroform here," he said; "when you go to bed pour the chloroform upon the centre of a folded handkerchief, lie upon your side on the edge of your pillow, and inhale the drug, carefully keeping your mouth closed. Sniff away at it just as if it were smelling-salts; the pain will disappear, and you will sleep like a top."

Now I longed for night. When it arrived I jumped into bed, thirsting for sleep, and carefully carried out my instructions. Having lowered the gas, I took the folded handkerchief, emptied the contents of the little bottle upon its centre, laid my head upon the edge of the pillow, closed my eyes and mouth, and proceeded to inhale as directed. Gradually, yet rapidly, a feeling of drowsiness crept upon me. First I seemed to be looking upon a black and inky darkness; then the darkness seemed softly illuminated by minute points of light like distant stars. Presently the light of these stars became more intense, and I noticed that they were arranged in innumerable parallel rows. It gave me a strange pleasure to gaze upon them. Now the pain in my face disappeared; the stars seemed to grow brighter and to increase in size; then suddenly they all began to revolve at the same instant. I gazed at them (this, at any rate, was the sensation) with a sort of pleased astonishment and curiosity. As I gazed they revolved still more rapidly; then I heard a sort of puffing noise, which increased in rapidity, exactly resembling the sound made by a distant engine leaving a station; and then I sank into a deep, tranquil, dreamless sleep, which lasted all the night. In the morning I woke greatly refreshed, and the pain in my face had gone. The one sound night's rest had done me an immense amount of good. My mind no longer dwelt painfully upon my miserable trouble. I could face the share list with calmness. Once more I was a comparatively happy man, and I went on with my ordinary avocations in a half-jubilant state.

But again that night sleep avoided me. I counted a thousand, I repeated the multiplication-table, I tried to picture in my mind's eye an innumerable succession of sheep jumping over a hurdle, I tried to recall the last Sunday's sermon; all to no avail. Morning came to find me still weary and wakeful; and so I resolved to call again upon my friend the dentist. I did so. But my visit was not altogether a success. On learning what I wanted my friend sternly refused fresh supplies. Chloroform, he said, was a dangerous drug: to use it once was all well enough; the habit of taking it was worse than dram-drinking. When I began to entreat he bowed me out of the room.

I indignantly marched to the nearest chemist's and asked for an ounce of chloroform as calmly as if I had been demanding a black draught. The chemist inquired if I were a medical man, and on my replying in the negative declined to supply me. Afterwards I went to four other chemists with the like result. How I obtained the drug at last is neither here nor there; but by the exercise of some ingenuity I became possessed of a pound bottle of Duncan and Flockhart's chloroform, and a two-drachm glass measure graduated in drops. And now I found myself in possession of a panacea more potent than "poppy or mandragora, or all the drowsy syrups of the world." Every night I used to procure sound and comfortable sleep, and I went on doing so unconscious of my danger. For three whole months I continued in this course. The habit had mastered me from the first. This is an honest confession and not a sermon, and I am bound to state that the only inconvenience I ever experienced was a slight feeling of nausea in the morning. Two distinct desires irresistibly prompted me: the one an intense longing for sleep and a refuge from mental worry, the other a hankering after the pleasurable sensations which the inhalation of the drug invariably produced. My subsequent experiences in this respect were very like to the first one. I would fancy myself stretched in luxurious enjoyment upon a soft silken couch, gazing upon a wall upholstered like the interior of a first-class railway carriage; only that the walls were covered with satin of delicate texture and the softest colours, on which the eye delighted to dwell. After a while the little buttons on the wall would gradually become luminous and commence to rotate, slowly at first, but with rapidly increasing velocity. As they grew larger and brighter, sweet odours seemed to arise about me; then I would hear the sound of the engine leaving the station, and I sank away in sleep. The illusions were always pleasant, and generally more delightful to the sight than to any of the other senses. There was a sort of feeling as of the gratification of a violent curiosity. As soon as I inhaled the drug the anticipation of some delightful vision came over me; and I was never disappointed. The visions were always beautiful; often complicated, sometimes exceedingly minute; generally in monochrome, but often in the most brilliant colours. What I saw always appeared at first in a state of rest; but a regular and increasing motion was developed, the pictures became more vivid, the puffing noise invariably supervened, followed by sound and undisturbed slumber.

By this time the habit had taken such a hold upon me that during the daytime I could think of little else but of my pleasure to come. To produce the desired effect the dose had been slowly increased. I was now inhaling regularly sixty drops every night.

Probably I should not be here to tell the tale if I had not become engaged to be married. My two future brothers-in-law invited me to accompany them in a boating party on the Upper Thames. I accepted; and

then it suddenly struck me that I should be deprived for one whole week at least of my favourite drug. Detection in such indulgences would certainly break off the marriage. It would not do to be found out; so I started without a single drop of my divine elixir. I was quite out of practice in sculling, and at night-time I lay down to rest as tired as a dog and dead beat. That was my salvation. I slept like a top, and I have never inhaled a single drop of chloroform since.

I know a good deal more about it now than I did then. I know now that had I shifted in my sleep on to my face I might have been suffocated, and probably should have been. I know now that had vomiting taken place—and it is one of the commonest results of the inhalation of the drug—there was every likelihood of a similar result. I know, too, that with a slightly larger dose there was every chance of my being found dead in my bed.

If this confession should draw but a single individual from the dangerous path I used to tread, I shall not have altogether failed of my object in writing it. I have contented myself with a description in plain unvarnished language of my sensations, being anxious not to exaggerate them in any way. And all that remains to be said is, that the inhalation of chloroform is the most fatal of all such habits, and the drug itself is the most treacherous and subtle of the narcotics that foolish people indulge in.—*St. James's Gazette.*

Neuralgia Powders.—Take of quinine, sixteen grs.; carbonate of iron, one ounce; Dover's powder, forty grs.; jalap, forty grs.; essence of peppermint, fifteen drops. Mix, and divide into eight powders, one to be taken twice a day.

Bronchitis Cure (Dr. Dobell). — Carbonate of ammonia, thirty-five grains; ipecac. wine, two drachms; chloric ether, one drachm (one to seven); paregoric elixir, two drachms; aquæ ad., eight ounces. Mix. One tablespoonful three times a day, or oftener if the cough is troublesome.

Precautions against Scarlet Fever.—In view of the spread of scarlet fever in London and its suburbs, it appears to be very important that householders generally should understand the precautions which they must individually adopt if the progress of the disease, when it has once gained a footing, is to be checked. In these circumstances, the National Health Society, of 44, Berners-street, London, W., has prepared memoranda, couched in plain and simple language, explaining "how to prevent scarlet fever from spreading." These memoranda might very usefully be distributed from house to house in all districts by the officers of the sanitary staff. They comprise—"Hints to Avoid Catching Fevers" (pamphlet), 1d.; "How to keep Scarlet Fever from Spreading" (pamphlet), 1d.; "How to keep Fever out of Houses" (leaflet), 9d. a dozen; "How to Prevent Scarlet Fever from Spreading" (leaflet), 9d. a dozen; "Cheap Disinfectants" (leaflet), 9d. a dozen. Missionaries and others should provide themselves with these cheap health publications for distribution among the poor.

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The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

HINTS ON THE PHYSICAL REARING OF INFANTS.

By Mrs. Henry King-Parks.

Author of "In the Morning of Life: Being a Practical Guide to the Management of Children;" "Our Infants: How to Rear Them;" &c.

THIRD AND CONCLUDING PAPER.

Clothing.—One of the first signs of vitality in an infant is the instinctive desire to kick; and this fact should convince us that the free movement of its body, arms, and legs ought not to be restrained by tight clothing; yet, strange as it may appear, mothers and nurses vie with each other in compressing, by tight bandages, the stomach and other portions of the bodies of infants and children, to such an extent that they have no liberty to stretch their legs, and scarcely room to breathe. No wonder they cry, poor darlings! the mystery is that so many survive their childhood. British mothers are shocked to read of the barbarous cruelties practised by the Chinese in respect to the feet of their children, although prone to forget that their own general treatment of their infants, as regards the covering of their bodies, is equally irrational and unkind.

Warmth and freedom from restriction are the two great requirements of Nature; and the closer we conform thereto the greater will be the certainty of our infants becoming strong and healthy. Savage nations never think of manacling their children; and as a consequence, probably, very little deformity of body is to be found among them. Alas! the same cannot be said of the inhabitants of our own country. But whilst infants should be kept warm, it does not follow that a large quantity of clothing is either necessary or wholesome. The *quality* of the clothing should be more looked to than the *quantity*. Cotton, linen, and other close textures neither absorb the perspiration nor permit the exhalations of the body to escape. Wool and flannel, on the contrary, secure both warmth and ventilation. It must be borne in mind that the body of an infant is exceedingly tender; and the flesh and bones so soft that they yield to, and suffer from, the slightest pressure. Fine cambric is usually worn next the skin, and, over that, light flannel and a wool frock. But fashion—the bane of a child's existence—often steps in and sets all the rules of hygiene at defiance, by covering the child with sundry robes and mufflings which, if they do not exactly deprive it of life, convert it into an invalid from its birth. The skins of many infants and adults are peculiarly sensitive, and would be irritated by direct contact with flannel; such persons are, however, in the minority, and I counsel a trial of pure, soft flannel *next the skin* in preference to any other material. Flannel, as I have said, will absorb moisture; but if a non-absorbent material, such as linen or cotton, be placed between it and the skin, its efficacy will be considerably impaired.

Plenty of wool (I recommend here especially the pure woollen underclothing made by Messrs. E. Ward & Co., of Bradford) and flannel will, when judiciously used, be of vast service to the child. Looseness with warmth ought to be the rule. Close head-coverings are most objectionable. When buying coloured flannels, &c., the purchaser should ascertain that the dyes are "fast"—many dyes are the reverse of this, and, some being

poisonous, occasion skin diseases by rubbing on to the body. Better far to use uncoloured and natural wool like that of Messrs. Ward. Washing the chemises in water containing soda is also a risky process. Underclothing should, of course, be frequently changed, especially soiled napkins. Puff-powder should be used sparingly, and only applied to those parts that require its application. Violet powder is usually poisonous; that known as Fuller's Earth is the safest to use when we are in doubt about the quality of others. Messrs. Woolley's Sanitary Rose Powder is a most excellent preparation for nursery use. Ordinary pins are altogether out of place; "safety" pins or tapes (not drawn too tight) are far superior.

Cleanliness.—To prove the necessity for cleanliness would require a treatise on the structure and functions of the skin. We all know, however, that our health and comfort depend upon the daily ablution, in whole or in part, of our bodies. Dust and perspiration clog the pores, of which the surface of the skin is supplied with millions. If these miniature holes, or pores, be not kept clean, they cannot perform their functions in so thorough a manner as when the dirt is not allowed to accumulate. The dry rubbing of our clothes assists the excretory work of the skin; but soap, water, and rubbing are the only efficient agents for keeping the skin in a healthy state. Common soap contains an excess of alkali, which will injure the skin, and should not be used. Pure, white curd soap is the best kind, or that made by the Messrs. Pears may be used on account of its purity.

Although an infant should not be washed in cold water, the temperature should be gradually lowered until it learns to love (as it will do) the cold water bath. Nor should the temperature at any time be so warm that the hand will not bear the heat. In winter time the cold bath ought not to be given to *infants*. I conceive it to be an error of judgment to withhold the cold bath too long; and in cautioning the reader against making a *sudden* change, I would, at the same time, point out the absurdity of accustoming a child to tepid water to such an extent that it would consider immersion in cold water as a severe punishment, instead of what it really is—a bracing and refreshing luxury. Much, however, will depend on the constitution of the child; and whilst cold water will not "harden" *infants*, the constant use of tepid or warm water must, and will, weaken them after a certain age.

The secret of washing is to do it quickly, but not in a draught; using a soft sponge or flannel; making use of two waters, for the purpose of freeing the skin, in the second water, from soap; drying quickly and thoroughly, under the arms, joints, &c., and the head, with a soft towel; and gently rubbing the body with the warm hand before putting on its clean and well-aired clothes. This operation should be gone through both morning and night. I need scarcely remind you that if the nurse is not clean and tidy in her own habits she will very likely neglect cleanliness in the nursery.

Weaning.—It is a critical period in the life of a child when taken from the breast to find its sustenance in the ordinary food of mankind. What I have written on hand-feeding is applicable to this portion of my subject. As a rule, cold weather is an improper time to wean a child. Seven to nine months, according to circumstances, is the general time to commence. The weaning must be gradual, and the food of a light, nourishing kind. Assuming the child to be, say, eight or nine months old, it will be able to digest farinaceous products. I have had a long experience of Neave's Food, prepared from cereals, and I heartily recommend its adoption. Bermuda arrow-root, corn-flour, soft-boiled Java rice, sago, tapioca, &c., are relished by children; but these articles must not form the *only* aliment, as they are so many varieties of starch—most useful in their way, and when eaten with pure milk, but not as *staple* food. Marshall's Tritola, manufactured in Glasgow, contains twelve per cent. of flesh forming matter. Taken in moderation, I know of no food-product so wholesome and delicious. Chicken-soup and beef-tea are the two best forms of animal food for infants. Avoid meat, pastry, gravy, and other indigestible substances. Above all, practise moderation, and abstain from giving alcohol to the young.

My space is exhausted before my subject. Yet I trust that my brief review of the salient points to be attended to in the physical rearing of infants, will induce mothers to make further inquiry into the *details* relating to the different features.

THE EFFECTS OF TOWN LIFE UPON THE HUMAN BODY.

Dr. Milner Fothergill in a recent paper said that it is generally recognized that the effect of town life upon the physique is not beneficial, and as the population of boroughs has now exceeded that of the country, the fact becomes one worthy of our attention. The great and rapid increase of large towns at the present time adds to the importance of the subject and deepens its gravity. Of old there were but few large towns, in our modern sense of a "large" town; but Lugol, the great French authority on "scrofula," noted how the population of Paris deteriorated, and how scrofulous were the third generation of persons who came in from the country perfectly healthy.

Other observers have noticed the bad effect of town life elsewhere. And the recent researches of Mr. James Cantlie have demonstrated the rarity of a pure-bred Cockney of the fourth generation. Of old the baron lived in his castle, while the populace lived around in villages of limited size. For men of all conditions of life the one thing to be coveted above all others was physical prowess. For work, for war, for games which were largely mimic war, bodily strength was essential. No courage, no skill, could effectually compensate for the want of thews and sinews. Work, war, sports, revels, all too were conducted in the open air. But civilization

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brought about changes profoundly influencing the life of the individual. The development of commerce entailed the growth of towns; and then it was found that in the new struggle for existence the battle went rather to the man with the active brain than to the man with a massive framework.

The active brain became now the one great thing to be coveted rather than physical prowess. The tendency of town population is to dwindle, and this dwindling is seen markedly in the feeble digestive capacity of town dwellers. They cannot eat the pastry, the pie-crust, the cakes, which form so large a portion of the dietary of their country cousins. If they attempt these articles of food they give themselves the stomach-ache. Consequently they live on such food as they can digest without suffering—bread, and fish, and meat; above all the last—the sapid, tasty flesh of animals, which sits lightly on the stomach, and gives an acceptable feeling of satiety, so pleasant to experience. The town-dweller, in his selection of food, is guided by his feelings; he avoids what is repugnant to him.

Such selection is natural and intelligible, but it is fraught with danger all the same. Consumption, and Bright's disease seem Dame Nature's means of weeding out degenerating town dwellers. The offspring of urban residents are another race from their cousins who remain in the country. The latter are large-limbed, stalwart, fair-haired, Anglo-Danes, while their urban cousins are smaller, slighter, darker beings, of an earlier and lowlier ethnic form, and resembling the Celto-Iberian race. And amidst this general reversion we can recognize a distinct liver-reversion to the early primitive uric acid formation of the bird and reptile. A recognition of these facts must lead to such modifications of the food customs of town dwellers as are indicated. The spread of teetotalism and vegetarianism tells of a dark groping in the right direction in blind obedience to the law of self-preservation. There must also follow some modification of the existing system of education; for it is by the imperfectly nourished town child that the weight of the burden of education is most acutely felt.

Comparative Locomotion.—Their recent researches on the locomotion of the horse and elephant enable the authors to establish certain analogies and differences presented by the posterior member of these quadrupeds compared with the movement of the lower member in man. The parallelism, which is illustrated by several diagrams, bears both on the slow and rapid motion (walking and running) of the three types here under consideration. Contrary to the general opinion, there appears to exist in the step or pace of the quadrupeds a period of double rest, more prolonged in the hind than in the fore quarters. It is also shown that the trot in the horse corresponds unquestionably with the running action of man, but that elephants have no such action, just as man lacks the gallop of the horse, which in this respect thus stands at the head of the series. But, when urged to quicken their speed, the elephants broke into an action somewhat approaching that assumed by man when passing from a walk to a run. In general, both in slow and rapid motion, the action of the pelvic member remains essentially the same in all three types. The difference between them lies in the action on the concurrent limbs, which is slight between man and the elephant, much greater between these two and the horse.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

PAPERS ON ALCOHOL.

SEDENTARY MEN AND STIMULANTS.

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CONCLUDING PAPER.

Next to alcohol in its injurious effects upon its consumers, I have placed tea, and its proper position there will hardly be disputed by any observant physician, although, as remarked, an immense hiatus exists between the two substances. Chief among its bad effects must be ranked constipation and excessive nervousness. It contains about eighteen per cent. of tannin—a well-known astringent which notably restricts the normal action of the intestines. The evils of the habit thus induced need not be discussed here. It is sufficient to state that they are numerous and very great.

Again, when taken in strong solution and frequently, tea produces nervous tremors, irregular action of the heart, and, in animals, even paralysis. The excessive tea drinker starts and screams at every sudden incident. Very marked are its paratriptic effects among ordinary domestics who are greatly addicted to its use. Every housekeeper observes among her servants some who labour hard and continuously, who maintain their flesh and strength, and yet who eat almost nothing. Year after year they continue this custom without perceptible change. Such persons consume tea in great excess. But, though, often enough, it renders their lives miserable, I am not aware that it results in disease or shortens the natural term of existence. It is certainly a paratriptic of great value.

It is not a little remarkable that tobacco, one of the least harmful of these substances, should have been so long and so loudly decried. From the "Counterblast" of King James to the fulminations of the latest gathering of the clergy, the diatribes uttered against its use have been equalled only by the denunciations of alcohol. In these, many physicians, who should know better, have heartily joined. And yet, in spite of this, not only, but in defiance of its nauseous properties, and of the disgusting forms in which it has often been used, the rapidity and universality of its adoption by the race speak volumes for its peculiar adaptation to the demands of life.

Quite incapable of producing the exhilarating effects of alcohol, mildly narcotic only as compared with opium and other substances of this class, almost destitute of power to give pleasurable sensations or to excite the emotions, its acceptance by man has no parallel in quickness and extent, its hold upon him is absolute, and its popularity ever continues to increase. It appeals equally to the savage, to the civilized, and to all classes in the community. And for these truly wonderful facts there is no conceivable sufficient explanation, except this, viz.: that it is, of all others, the paratriptic which best meets the demands of customary life, is best adapted to the habits of men, and is practically found to produce but slight injurious results.

Certainly most of the bad effects which have been charged to its excessive and continued use are either entirely undeserved or greatly exaggerated.

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ALEXANDER P. WATT, 2, PATERNOSTER-SQUARE, LONDON, E.C.

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It is matter for well-merited astonishment that even men of discernment are so ready often to select a single one out of the endless chain of causes, and attribute to it alone certain results. Surely of all sciences etiology is least entitled to respect. And no more glaring example of the foolish facility mentioned exists than that common even among eminent oculists, who charge upon the excessive use of tobacco a certain form of atrophy of the optic nerve. And this they persist in doing even though that opinion is based upon a mere supposition, and although competent colleagues of their own, residing in countries like Turkey, where the ordinary use of tobacco fully equals what we should term great excess, declare that this form of disease of the eye is there utterly unknown. There are nations where the smoking of tobacco is begun by infants before they can walk, and where the habit is universal, and were these wiseacres correct in their etiology, the entire adult population ought logically to be blind.

Ex uno disce omnes. Not a single charge brought against tobacco has a better basis. With great wisdom it is remarked, how much better health some individual has obtained since ceasing to use tobacco. But any decisive change in long-continued habits—even what are termed "good habits"—is often temporarily beneficial. The great curative principle of change is what has been successfully appealed to here—the most powerful, and, in fact, broadly considered, the only existing curative principle.

In estimating the true influence of tobacco and its congeners, it is manifestly unfair to consider individual instances of their use. Only by taking masses of men who for years are under control as to their diet and habits, and who, therefore, live upon equal terms, can we approximate a fair estimate *ex uso*. And in this regard there could be no test more equitable than that made by Sir John Sinclair and recorded in his "Code of Health" recently published. In the pension hospitals of England, Sir John found one hundred and fifty men over eighty years of age. Fifteen of them were over ninety, and four were over one hundred. These formed the remnant of the armies of England. The rest were dead and of these survivors all but two had been consumers of "the weed" all their lives. It may be added that the use of tobacco by smoking forms the most desirable paratriptic for the dyspeptic, as it decidedly assists digestion by stimulating the secretion of gastric juice. It appears to be most useful to men of lymphatic temperament, and to disagree most decidedly with those of highly developed nervous organizations.

Regarding coffee little need be said. Its effects are similar to those of tea; but, since the proportion of tannin is much less, it does not constipate, as a rule, and, as it is less abused, its harmful powers are less manifest.

Concerning coca, the great South American analogue of tea and coffee, but few words are necessary, since it is only a recent importation in this country and in Europe. An experience of more than twenty years in its use by the writer, and by many others under his direction, however, enables him to state his conviction that, while it is the most powerful paratriptric known, it is also the one which least disturbs the functions of the body, and is, therefore, probably the least harmful of any. I have elsewhere* discussed its properties *in extenso*, and to that work the reader is referred for more complete information.

And now, of all these paratriptics, it should finally be said that only personal trial or skilled advice can determine which is best suited to each individual. The writer has often successfully prescribed them to many of the class to which reference has been made for the relief and cure of the maladies named. And, if to the use of these be added an entire avoidance of *the greatest gastronomic sin of the times, viz., an indulgence in all forms of freshly baked bread*, he has good ground for the opinion that biliousness and dyspepsia would largely cease to afflict sedentary men.

* See Essay on Coca. Fords, Howard & Hulburt, N.Y. 1881.

Burking.—A man named Ross has recently been convicted of murdering a poor (white) woman in Baltimore, U.S.A., and selling her body to a medical college for dissection. The only extenuating circumstance mentioned was that he was thought to be weak-minded, and not quite responsible for his actions.

An experiment is being made in Brussels with a portable hospital composed of slabs of leather cardboard which can be easily attached, affording facilities for removal and reconstruction in a very short time. The hospital with which experiments are being made contains twelve beds which fold up within the structure, the inclusive cost of which is £120 (576 dols.). It is stated to be of American design.

A New Scheme to Help the Hospitals.—The third annual report of the Hospitals Association shows that the number of members and associates is steadily increasing, and that representatives of the most important hospitals, asylums, and nursing institutions are joining the Association in considerable numbers. The scheme of Sir Andrew Clark, Bart., M.D., for increasing the funds of all the hospitals is now being brought under the notice of the clergy and ministers of all denominations and of the representatives of other bodies, beginning with the metropolis. It proposes, as the *British Medical Journal* points out, that all persons interested in the treatment of the sick poor, especially the Managers of Hospitals, Boards of Guardians, clergymen of all denominations, and local representative societies, should affiliate themselves to the Hospitals Association in London by the formation of a Local Hospital Association, of which at least one medical practitioner should be a member, the Hospitals Association to be the central and representative organization, and its London office, Norfolk House, Strand, a bureau of information, a medium of communication, and a centre of reference. Its aim will be to supply all kinds of information on hospital questions; to give advice respecting the organization, management, and maintenance of all classes of hospitals; to arrange for lectures to such local Hospital Associations as may desire them; and to render assistance in the management of public meetings for the furtherance of hospital purposes. Every affiliated local Hospital Association may nominate a representative who would enjoy all the privileges of the Association and be eligible for election to any of its offices. The annual subscription for each member or each affiliated local Association will be one guinea. Sir Andrew Clark's proposals have excited a good deal of interest, and the following contributions towards the £1,000 required have already been given to enable the Council to make these proposals as widely known and helpful as possible: Messrs. Rothschild, £25; Mr. A. D. Clarke, £26 5s.; the Fishmongers' Company, £26 5s.; the Drapers' Company, £21; the Mercers' Company, £21; the Cloth-workers' Company, £10 10s.; Messrs. Messel & Co., £10 10s. Sir Andrew Clark has himself contributed £100.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Tree Planting and Drainage.—It is not merely an æsthetic fancy, but equally a prudent regard for the health of the community, which has led civic authorities to plant with bordering trees many of the greater thoroughfares in towns and cities. By this arrangement the advantages of a purer air and of shade in warm weather are gained for the townsman, besides the implied increase of space and the amenity conferred by thus practically transporting a strip of country into town. It is one of the happiest features in the development of cities now so rapid, that in their outer and growing zone the hard lines of road, wall, and railing are interrupted at frequent intervals by spaces of green sward and by the luxuriant foliage of climbing shrub and spreading tree. In so far we have learnt the lesson of experience, and, in thus preserving round our homes a healthy atmosphere and some degree of rustic beauty, are wiser for ourselves than the town dwellers of a former generation. Still, we are not always duly careful even in our wisdom, as the sequel shows. This very custom of tree planting in streets is open to a danger fortunately not common, but still grave enough to counteract, where it exists, the best effects of rural surroundings. It has happened repeatedly, as we are reminded by the letter of a recent writer on this subject, that the roots of trees in their growth have sought out the crevices of drain pipes adjacent, and, penetrating these, have grown with such vigour on the nourishment which they found there as completely to choke the pipes and prevent the exit of sewage. We have here, of course, no argument against the continuance of the boulevard system, but certainly a caution, enjoining first the more perfect adaptation of drain segments, and secondly a kind of care not always observed in the relative arrangement of wayside shrubs and trees.—*Lancet.*

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Dress and Health.—In every age the use of dress as an ornament to attract the other sex has rendered the censures of reformers on its extravagances unavailing. When, for instance, a mania for classicism afflicted the patriots of the French Revolution, the ladies of France adopted the dresses of Greece and Rome, or what they imagined to be such, with fatal eagerness, and with undraped bodies and sandalled feet braved the severity of a Parisian winter. Their light attire exposed them to diseases of the chest, nay, to death itself, but they heeded not. The gold rings shining on their feet could not protect them from the cold of winter, yet they remained faithful to gauze-clad nudity.* It was vain to remonstrate with them on their insufficient clothing; with French readiness they would reply with an epigram—

"Le diamant seul doit parer
Des attraits que blesse la laine."

In the same way no arguments of utility or sanity are likely to induce an elderly lady to adopt the curtailed garments recommended by Dr. Jessop, if the result should be to render her an object of ridicule to man when compared with a sister dressed in the trailing garments of modern fashion. Much may be done, much has been accomplished in the direction of more sanitary clothing, but it has been by gradual and judicious reform of material, and unseen alteration of undergarments, at the suggestion of medical men, not by sudden and violent changes of fashion and interference with prejudice. Many ladies now actually wear the woven woollen vests and the flannel knickerbocker drawers recommended by Dr. Jessop. Suspenders attached to the stays replace the injurious garter, and clothed necks and shoulders have replaced, at least in the day-time, the low-necked dresses of our grandmothers. Much remains to be done in this matter, but it must be attempted with a complete appreciation of the difficulties of the position, and with a competent knowledge of feminine laws of thought. Flowing garments, for instance, will in all probability never be forsaken, because of the superior dignity they confer on the female figure. Indeed, in our opinion, the best hope of discarding the hateful stays rests in a gradual return to the beautiful costume of Greece; for it is almost certain that while waists are accentuated, stays will be worn; but the change must take place in the natural direction of gradual development, directed by competent and judicious leaders of fashion, not in that of violent and inconsiderate revolutions. Until we are sufficiently educated to accept the wise aphorism of Edward I. as our guide, a complete reform of dress is very hopeless. It was that great king who said: "It is impossible to add to or diminish real worth by outward apparel; the only magnificence we must seek is the magnificence of noble and heroic deeds."—*British Medical Journal.*

* A fashion they carried so far as to discard chemises for one whole week.

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How to Destroy Contagion.—Professor Koning, of Göttingen, has suggested the following most certain means of destroying the infectious element of contagious diseases, no matter what the nature of the disease may be. The only drawback to its popular use is the powerful and poisonous nature of the disinfectant, viz., corrosive sublimate, which, from its superiority over all other disinfectants, might be termed the king of disinfectants. Its dangerous nature, however, almost prohibits its being used by any but professional hands, or by those who perfectly understand its powerful character. The mode of procedure is very simple. From one and a half to two ounces of corrosive sublimate are put on a plate over a chafing-dish, and then the windows and doors are closed. After the expiration of three or four hours the windows are opened, and the apartments thoroughly aired. The person entering the room should take the precaution to hold a damp sponge or cloth over the mouth and nostrils, in order not to inhale the vapour. The following day the windows are again closed, and some sulphur is burned in order to neutralize any of the mercurial fumes which may still linger about the furniture or other articles. The room is to be again aired and cleaned, and will then be ready for occupation. This treatment also effectually destroys bugs, fleas, and all kinds of insects, and the professor states that since adopting this method of disinfection, he has never known a second case of a contagious disease which could be attributed to infection remaining in the room. After scarlet fever, measles, erysipelas, or pyæmia, the results were most satisfactory.

Fireproof Material.—Dr. Doremus says that the lightest tissues can be rendered uninflammable by dipping them in a solution of phosphate of ammonia in water. It will be found impossible to set the fabric so treated on fire.

TWO GREAT LEGACIES.

WHAT THEY ARE; AND, WHAT THEY HAVE ACCOMPLISHED.

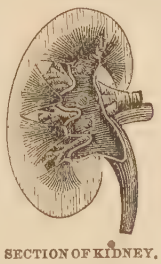
RICHELIEU.

"SIRE," exclaimed a man, in the homely garb of a mechanic, to Richelieu, Prime Minister of France, as he was entering his palace—"Sire, I have made a discovery which shall make rich and great the nation which shall develop it. Sire, will you give me an audience?"

Richelieu, constantly importuned, finally ordered the "madman" to be imprisoned. Even in gaol he did not desist from declaring his "delusion," which one day attracted the attention of a British nobleman who heard De Cause's story, and developed his discovery of steam power.

All great discoveries are at first derided.

Nine years ago a man, yet under middle age, enriched by a business which covered the United States, found himself suddenly stricken down. When his physicians said recovery was impossible he used a new discovery, which, like all advances in science, had been opposed bitterly by the schoolmen. Nevertheless, it cured him, and out of gratitude therefor he consecrated a part of his wealth to the spreading of its merits before the world. Such in brief is the history of "Warner's SAFE Cure," which has won, according to the testimony of eminent persons, the most deserved reputation ever accorded to any known compound, and which is finally winning on its merits alone the approval of the most conservative practitioners. It is a patent remedy. It cures disease by removing the cause, cleansing the fountains, and enriching the blood. It gives strength and vigour to the digestive and muscular system. Ninety-three per cent. of all disease which afflicts humanity arises from disordered kidneys. This is shown by medical authorities. "Warner's SAFE Cure" has a direct action on the kidneys. It is a food as well as a medicine for them; it is restorative; it is healing; and Nature, when allowed her full play and scope, will cure nearly all disease if the organs named are intact. "Warner's SAFE Cure" cures congestion of the kidneys, backache, and all bladder and urinary difficulties. It prevents stone, removes dropsy, and is absolutely the only remedy that dissolves and expels from the system uric acid, of which there is a quantity secreted each day from the waste and *débris* of muscular activity, sufficient, if retained in the blood, to poison six men. To its presence in the blood can be attributed all those sudden deaths which are set down as heart disease, apoplexy, and paralysis.



SECTION OF KIDNEY.

This great specific relieves the kidneys of too much blood, frees them from irritants, no matter of what name or nature. It also cures jaundice, enlargement of the liver, biliousness, headache, dyspepsia, constipation, gall-stones, and a horde of other unpleasant indications of a disordered liver, because it is the only known specific that is capable of acting on both liver and kidneys at the same time. It increases the secretion and flow of bile, removes unhealthy formations, drives them out of the blood, and restores it to that natural condition without which health is an impossibility. It is the wife's and mother's friend; it acts in harmony at all times and under all circumstances with their delicate natures, and removes all complaints peculiar to their sex, except those requiring surgical relief.

Almost every physician of education will tell you that all the difficulties from which women suffer are invariably due to congestion of the pelvic organs, with impaired kidney action arising from stagnation of the blood-vessels. "Warner's SAFE Cure" is acknowledged by thousands of the best medical men to be the only true blood purifier, acting on a scientific principle, removing all poisonous matter from the blood, stimulating the kidneys, spleen, and liver, and when these organs named are kept in health, disease cannot enter the threshold of the body.

WRAPPER.

Our bodies are composed of the most delicate machinery, each organ acting in harmony with the others, and when one is deranged, or a trifle out of order, the balance soon feel the effect. Uric acid must be driven out of the body, for its retention means disease and death. When retained, it is carried to the most remote parts by the blood, and no organ is left untainted, from the head to the feet.

As you value your health, take it from time to time to avoid sickness, as it will at all times keep the vital functions up to par. We guarantee a beneficial effect for all the disorders named where degeneration has not taken place, but even then the medicine will thoroughly benefit you. In every instance it has established its claim. It can be procured of all chemists at 4s. 6d. per bottle. Be sure that you get the genuine; and beware of vile substitutions. Look to your condition at once, attend to it to-day, do not postpone treatment for an hour, and be assured that the proper use of "Warner's SAFE Cure" will ensure you many years of life and health.—*Farmer and Chamber of Agriculture Journal*, Sept. 19.

DAMP-PROOF GLUE.—Take of the best and strongest glue enough to make a pint when melted. Soak this until soft. Pour off the water as in ordinary glue-making, and add a little water if the glue is likely to be too thick, When melted add three tablespoonfuls of boiled linseed oil. Stir frequently, and keep up the heat till the oil disappears, which may take the whole day and perhaps more. If necessary, add water to make up for that lost by evaporation. When no more oil is seen, a tablespoonful of whiting is added and thoroughly incorporated with the glue. Prepared in this way, the glue is stronger than that made in the ordinary way, and resists dampness far better. It does not exactly come under the head of waterproof glue, though it is not affected by moisture. Glue of this kind has been used with success in fastening belts in wheel pits where the joint was constantly exposed to damp.

SMALL-POX AND VACCINATION.—The *Lancet* gives the following important reply to Mr. Tebb's latest manifesto:—Mr. William Tebb, well known as an anti-vaccinationist, quotes, in a letter to the *Times*, a portion of an article which appeared in our columns over sixteen years ago, and uses it to help him in his argument that vaccination is no protection against small-pox. He refers to our statement that over 10,000 lives had, up to the date of our writing, been sacrificed in England and Wales to small-pox during the epidemic year of 1871, and that 73 per cent. of the admissions into London small-pox hospitals had been amongst vaccinated people. He refrains, however, from adding that our article showed also the exceptional virulence of small-pox on the re-vaccinated as compared with the vaccinated, and he ignores the fact that a primary vaccination in infancy is not held to have the power to afford complete protection against small-pox in after years, and this especially when those who have failed to secure re-vaccination find themselves in the midst of an epidemic which is essentially due to failure to secure the full protection of vaccination. Whilst investigations during the past ten years into the influence of vaccination have shown that the protective effect wears off, they have also abundantly proved how potent is the protection of a comparatively recent vaccination against small-pox. Any tendency to numerical increase in small-pox cases is amongst the adult classes, whereas the vaccinated infantile community, which in non-vaccination days suffered most, is practically exempt from the disease. In short, re-vaccination is as necessary as primary vaccination. The facts brought forward in the report of the Medical Officer of the Local Government Board for 1881 are very conclusive on the point of the protective power of vaccination as regards children. Thus, it is shown that of 55,000 children under ten years of age who had not been vaccinated, 782 died from small-pox that year; whereas the deaths amongst 861,000 vaccinated children were only 125. And these 125 included vaccinations giving every variety of evidence of protection—good, bad, and indifferent. And it is clear that if the 861,000 vaccinated children had died at the same rate as the 55,000 unvaccinated, an additional 12,000 small-pox deaths of children under ten years of age would have occurred in the metropolis that year, and that the immense saving of life effected was due to vaccination and nothing else.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules :—

1. All questions are answered free of charge in the columns of HEALTH.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

LETTERS TO THE EDITOR.

THE SICK AND THE HOSPITALS.

SIR,—One of the objects of the Hospitals Association is to afford precise information relative to the resources of the London and Provincial hospitals ; since it is admitted that delays, dangerous to health and life, are sometimes experienced in placing deserving cases in suitable institutions.

To carry out this object, and also the other objects relating to the organization—working and maintenance of hospitals, for which the association was founded—it is necessary to secure the co-operation and association of all persons interested in the treatment of the sick poor, and especially of the Managers of Hospitals, Boards of Guardians, the Clergy and Ministers of all denominations, and local representative societies.

We therefore earnestly solicit your consideration of the following scheme of affiliation adopted by the Council of the Hospitals Association, which, if successful, will bring into communication all persons interested in dealing with the sick poor. This scheme will facilitate and enlarge the means of keeping them, and will bring within the reach of every member of the Association an authentic and accurate knowledge of the economy and work of hospitals, and of their claims to public support.

1. All persons interested in the treatment of the sick poor, especially the Managers of Hospitals, Boards of Guardians, the Clergy and Ministers of all denominations, and local representative societies are invited to affiliate themselves to the Hospital Association in London by the formation of a Local Hospital Association, of which at least one local medical practitioner should be a member.

2. The Hospitals Association will be the central and representative organization, and its office in London will be a bureau of information, a medium of communication, and a centre of reference. Its aim will be to supply all kinds of information on hospital questions ; to give advice respecting the organization, management, and maintenance of all classes of hospitals ; to arrange for lectures to such local Hospital Associations as may desire them ; and to render assistance in the management of public meetings for the furtherance of hospital purposes.

3. Every affiliated local Hospital Association may nominate a representative, who will enjoy all the privileges of an individual member of the association, and will be eligible for election to any of its honorary offices.

4. The inclusive annual subscription for each member, or for each affiliated local association, will be one guinea per annum.

5. The new journal of the association, *The Hospital*, which is published weekly, will be sent post free to each member of the association, and to every representative of an affiliated local association.

In committing the scheme to your favourable consideration, we desire to renew the expression of our conviction, that affiliation to the Hospitals Association will greatly promote the interests of the sick poor, give much additional help to all who are concerned in caring for them, and contribute to the better understanding, and the more liberal support of the great work carried on by our hospitals in the healing the sick, the advancement of medical knowledge, and the dissemination of the experience so acquired for the common service of mankind.

A form of application for membership of the Hospitals Association in the case of individuals, and for affiliation in the case of local Hospital Associations can be obtained.

☞ Any further information may be obtained on application to the Secretary of the Hospitals Association, Norfolk House, Norfolk-street, Strand, London, W.C.—We are, Sir, your faithful servants,

ANDREW CLARK, M.D., *President.*

HENRY C. BURDETT,
Chairman Executive Committee.

Norfolk House, Norfolk-street, London, W.C.,
27th October, 1887.

QUERIES AND ANSWERS.

REPLIES : GENERAL, SANITARY, AND MEDICAL.

PLOMB.—Your best course will be to consult a dentist. It is evident that all attempts at self-cure are unavailing. If near London, consult Mr. Goodman, 41, Ludgate-hill, E.C.

J. FRITZ.—You suffer from a relaxed mucous membrane. Our advice to you is to brace up your system by taking a dessertspoonful of Scott's Pure Cod Oil Emulsion after your meals, twice daily, as long as cold weather lasts, and at bedtime occasionally inhale the vapour arising from a pint of hot water, to which a teaspoonful of Friar's Balsam has been added.

CRAMP.—Try the effect of bathing the limbs at night with hot water, in which Tidman's Sea Salt has been dissolved, and in the morning apply friction to the affected parts with a flesh-glove—one of Wilson's Hygienic Gloves will suit you. Clothe warmly in the woollen undergarments made by Messrs. E. Ward & Co., of Bradford.

W. B. CAMERON.—Try taking fifteen drops Fer Bravais after your meals, thrice daily, in water, and try the following gargle :—Tannin, one drachm ; camphor-water, six ounces. Label, "Use a little as a gargle frequently." A surgeon will alone be able to advise you further after examining the throat.

X. Y. Z.—Your eyes should be examined by a good oculist. Send stamped addressed envelope for address of such.

CAMBRIDGE.—First of all, clothe warmly each winter in sanitary woollen underclothing to be obtained of Messrs. E. Ward & Co., Bradford ; and secondly, take a dessertspoonful of Thomson's Cod Oil Cream (Dublin-street, Edinburgh) as long as the cold weather lasts, twice daily, after your meals, as a nutritive and tonic. This, along with Bokŏl, as a pure malt extract taken with dinner, will enable you to gain flesh and to brace your system up for the cold season. We do not think you need feel apprehensive of danger, provided you follow above directions.

BYSSHE.—Avoid all alcohol ; see that you also avoid constipation, and keep your mind easy. Take as much rest as possible, and use as an injection twice or thrice daily, a solution made by adding a few crystals of permanganate of potash to half a tumbler of tepid water so as to colour the water of a light claret tint. Glad to be of any further service if necessary.

OCULUS.—Avoid reading and writing more than is absolutely necessary, especially at night, and bathe the eyes with a lotion consisting of sulphate of zinc, twelve grains ; rose water, six ounces. Dilute a little of this lotion with an equal bulk of water for use. If not cured by this treatment, you should see an oculist. Note advice given to "X. Y. Z." above.

DEBILITY, R. W. B.—We should advise you to take plenty of out-door exercise, and to try a teaspoonful of the Syrup of the Hypophosphites thrice daily, in a wine-glass of water, after your meals, as a tonic. Of course, you must endeavour as far as possible

X. Y. Z. (Gloucester),—The Post Office does not deliver letters addressed to fictitious names or initials. Send us your name and address or stamped addressed envelope, and we will reply to your inquiry.

to avoid mental worry. Cheerful society will do much to aid your cure, but we should not advise you to plunge into public life as you propose. If we can aid you further, let us know.

H. Belt.—We should not think that any danger could arise from what you name. Pulvermacher's Belt is a genuine electrical appliance. If that you name has no battery attached, it cannot produce any electrical currents.

Actrice.—Try Borthwick's Winter Cream—made by Mr. Borthwick, Chemist, Selkirk, N.B. You cannot expect to have a healthy skin if you use cosmetics and paints as you indicate. A corset such as you describe induces malformation of body. You surely cannot expect us to recommend you to continue to wear any such appliance. Naturally, if you have worn a tight corset since you were twelve, your body will have become "deformed" into the shape of that garment. Your life need not be an unhealthy one, although the long hours and late hours, bad ventilation, and liability to cold, are all points against the chances of long life.

Maid Servant.—1. See advice given to "Actrice" above. 2. Your mistress must be a very singular person. We advise you to decline to serve in a house where you are compelled to distort your chest, and to adopt silly devices to whiten your hands. 3. If you do not get plenty of fresh air and exercise you cannot be healthy. Think less of your appearance and more of your health.

J. S.—If the person you name told you any such views and opinions in his lecture, you may set him down as a thorough quack, and we will add he is all the worse for being a "religious" quack. You need have no fears at all. Read the pamphlet "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will find full information therein. You require no medical treatment whatever. Simply keep your mind easy, and take the step you name whenever you please.

Leo.—Try a paraffin stove: and provide for free ventilation by the chimney. A fire, of course, is healthier than a stove.

Penitent One.—1. Read the pamphlet above recommended to "J. S." It will give you full information. 2. The person you name is a quack. 3. See advice given to "Molly" in this week's number. At night, occasionally, inhale the vapour arising from a pint of very hot water to which a teaspoonful of Friar's Balsam has been added.

Figure.—1. We do not know what Russians admire. We know tight-lacing is wrong and absurd under any circumstances. 2. Yes: if we mistake not you have already been replied to several times in these columns, that tight-lacing produces paleness because it interferes with the circulation of the blood. The gist of the whole matter is, that if you wear tight stays you will become unhealthy; nothing else need be said on the subject.

F. Knowles.—Read the pamphlet recommended to "J. S." above. If you desire any belt at all, purchase Pulvermacher's.

Christian.—See advice to "F. Knowles" above. Read the pamphlet recommended in that advice, and have all your fears removed. The pamphlets, &c., you send are those of a well known quack, who has simply been frightening you. Give up the habit; adopt ordinary rules of health, and you will get quite well.

Herts.—Try applying to the heels a little Thilum, to be had of Mr. Bowden, 43, King William-street, London, E.C. Soak the feet in hot water before applying the Thilum.

Granville.—Read the pamphlet recommended to "C. Cox" in the present number, and keep your mind quite easy. Follow out the directions regarding diet, exercise, &c., the pamphlet contains. You have been victimized as usual by quacks. Be wiser in future. For the affection you name, wear a suspensory bandage, and sponge the parts with cold water night and morning.

K. B.—Try the diet hints given to "Working Man" in the present number, and use the Cascara Cordial or the Cascara Elixir of Squire (413, Oxford-street, London, W.), as there directed. You should certainly avoid not only sugar, but much butcher meat. Give up pills and drugging and try the hints indicated, and if not bettered, write again.

No. 999.—Try applying (night and morning) the resorcin ointment made as follows: Resorcin, one drachm; lanolin, powdered starch, and oxide of zinc, of each two drachms. Mix. Wash the part regularly with tepid water and Iodoform Soap.

Forty-eight.—The symptoms you name indicate need for a radical change of diet. See and follow out advice given to "Working Man" in the present number; and if not cured, write again. You must give up all alcoholics, and drink Vichy Water for a time.

C. P. Gordon.—Clothe warmly all winter in Ward's (of Bradford) Woollen Underclothing, and avoid chills—this will prevent the development of rheumatic symptoms. For the rest, take a dessertspoonful of Thomson's Cod Oil Cream (advertised in our pages) after meals, thrice daily.

Non Calor.—1. You have need of a general bracing up, as well as of local treatment. Try the means recommended to "Surrey East" in Health No. 237, and during the day smoke one of Dr. Douglas's Maori Cigarettes or one of Marshall's Cubeb Cigarettes, bringing the smoke down the nostrils. 2. Wear a flannel or woollen nightdress; but you should sleep in a night-suit of wool, such as is made by Messrs. Ward, of Bradford. You should sleep in socks if your feet are cold; this is much preferable to hot bottles. The Cod Oil will brace up your system.

F. G.—Try painting the lumps, twice daily, with tincture of iodine till the skin becomes tender. To prevent boils, note advice given to "M. F." in the present number.

Grant B.—The water is unfit for drinking. It may not be absolutely unsafe, it is true, considering its source; but we advise you to employ a Howie's Filter (see advertisement in our pages) and to secure safety in this way.

Cinque Port.—Thanks for your letter, which, however, deals with too comprehensive a topic for our pages at present. We may direct attention to the matter at an early date.

Constant Reader.—[Please use a more distinctive *nom-de-plume* in future.] See and follow advice with regard to the hair growth given to "Netta G." in Health No. 238. With regard to the teeth and gums, you may restore the healthy tone by using Dr. Pierre's Eau Dentifrice (used as a mouth wash after food) and by brushing the teeth regularly with Dr. Pierre's Tooth Paste or Powder, advertised in our pages.

A. L. S.—Read the pamphlet recommended to "C. Cox" in the present number, and follow out the hints it contains regarding diet, cold sponging, and tonics. You will get quite well by attention to these hints, but above all you must not worry or be mentally excited. There is, in truth, no need to be so in your case. A Pulvermacher's Belt will aid your cure.

Working Man.—No drug alone will cure constipation. You must trust to diet to aid Cascara Cordial (twenty drops once or twice daily between meals) and to render permanent its good effects. Adopt a vegetarian dietary in greater part. Give up tea and coffee; substitute Scott's Oat Flour for tea at breakfast and supper; eat stewed fruits regularly at dinner; try whole meal bread; do not take much solid butcher meat, but try Brand's Beef Essence in the form of soups; white boiled fish may be taken; and Marshalls' Tritola in the form of milk puddings, &c. In your case a cold or tepid sponge bath should be taken each morning.

J. Ferguson.—Avoid alcohol, salt foods, pastry, and indigestible articles at large. See that no source of irritation exists in your clothes, and wash the affected parts twice or thrice daily with Iodoform Soap and tepid water, dusting thereon, after washing, a little Fuller's Earth. Drink Vichy Water for a time as a beverage. If these means do not cure you, write again.

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ZETETICK.—You must undergo a careful examination by a competent physician. This is your only safe course. Send us a stamped addressed envelope, and we will forward address of a London authority.

E. BAXTER. — You must not eat late suppers. Take this meal at least an hour and a half before bedtime. Take fifteen drops Fer Bravais thrice daily, after your food, in water. Let your diet be very light for some time—strong soups made with the Brand Beef Essence, milk puddings, white boiled fish, little solid meat, and limit your tea and coffee.

C. COX.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and you will glean much information regarding the restoration of your health from its pages. Follow out the directions as to the use of Cascara Cordial and diet given in the pamphlet, and note the other rules as to cold sponging, &c.

GRAYS. — Give Allen & Hanbury's "Tonga" for neuralgia. It has a high reputation, and is often prescribed by medical men. Ask your chemist for it. You must also look well, of course, to your general health; clothe warmly in Ward's, of Bradford, Woollen Clothing, and avoid chills.

DUFFUS.—There is no need for alarm. Wash the affected part with Iodoform Soap and tepid water once or twice a week, and rub into the irritated spot, night and morning, a little glycerine of borax. Internally you may benefit from taking fifteen drops Fer Bravais in water after your meals. Live generously but do not take ardent spirits; Bokö̈l as a pure malt beverage, is to be preferred. Write again if not cured.

DICK.—What you complain of probably depends on a too sudden change of temperature. Avoid such changes as far as possible, and use as an emollient face lotion at night, a little of the Winter Cream made by Borthwick, Chemist, Selkirk, N.B.

MAC.—1. Yes; the two preparations are of equal value; both being good. 2. Bicarbonate of soda. 3. A mere pinch of soda is sufficient. 4. Increases the demulcent character of the milk, but has no effect on digestion.

HAZEL.—Hazeline may be safely taken internally, and is so employed as a styptic and astringent. It is used diluted with water, as a gargle; the degree of dilution will depend on the severity of the throat affection. It may be used for any length of time. See that you get Burroughs, Wellcome & Co.'s "Hazeline."

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CURED INSTANTLY BY

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Prevents Decay. Saves Extraction. Sleepless Nights Prevented. Neuralgic Head-aches and all Nerve Pains removed by Bunter's Nervine.
All Chemists, 1s. 1½d.

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One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a few hours it becomes a perfectly hard and white Enamel, forming as it were a part of the original substance of the Tooth. All Chemists, 1s. 6d.

CATHERINE S.—By all means give the St. Jacob's Oil a fair trial, as a useful liniment. Use it as directed.

B. LOCKWOOD.—1. No; but you should give Quebascho Extract a fair trial. 2. The second you name, certainly.

L. M. M.—1. Try the Geddes' Hemlock Bark Extract; use it as a lotion diluted with water, as directed on the bottle. 2. In October.

M. F.—The best remedies for boils are care in diet, which should be light, vegetarian, and non-stimulating; a dose of Lamplough's Pyretic Saline in the morning, when required, as a safe aperient; and lastly, sulphide of lime powders. A druggist will make the powders as follows: Sulphide of lime, twenty-four grains; sugar of milk, half an ounce. Mix. Take as much of the powder as will cover a sixpence, every four hours, so long as the boils persist.

C. M.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and learn therefrom the health-rules for cases like yours.

PETER M.—Greasiness of the skin should be treated as follows:—Bathe the face morning and night with light white wine—Hungarian will do; or use the following lotion: Sulphate of zinc, two grains; compound tincture of lavender, eight minims; distilled water, one ounce. Apply two or three times daily.

NATURE.—Take five drops Pure Terebene (Burroughs, Wellcome & Co.'s) on a piece of sugar after your meals, as a remedy for flatulence.

C. FRENCH.—Use the following:—Bicarbonate of soda, one drachm; glycerine, an ounce and a half. Mix. Apply the lotion after washing. If this lotion does not relieve you, substitute for it the following:—Pulv. calamin. ver., two drachms; pulv. zinc, one drachm; glycerine, half an ounce; aquæ camphor. ad., six ounces. Mix. Label: "For external use only."

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Is three times as efficacious as the plain Oil.

It is almost as palatable as milk.

It does not nauseate or produce a loathing for food like the plain oil.

The Hypophosphites and Oil are so skilfully combined, that they are much more potent in building up flesh and strength than if taken separately, and SCOTT'S EMULSION is to-day the best remedial agent for the cure of

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Physicians universally prescribe it in preference to the plain oil, having seen its remarkable curative effects.

Any chemist can supply it at 2/6 and 4/6.

MOLLY. — Take a dessertspoonful of Scott's Pure Cod Oil Emulsion with Hypophosphites after your meals, thrice daily, during the winter. Brand's Beef Essence should be used by you as a light, nutritious dietary, in place of solid butcher meat.

L. E. P.—Keep the hair short, if possible, and use only a soft brush. Wash it once weekly with Iodoform Soap and tepid water, and rub into the roots each night a little glycerine of borax. If not bettered, write again.

ABEL KING.—When the irritation is present, apply a little of the following lotion to the parts twice or thrice daily, after bathing with tepid water, in which a little bicarbonate of soda has been dissolved; borax, two drachms; hydrochlorate of morphia, five grains; glycerine, half an ounce; rose water, four ounces. Mix. Label: "For outward use only."

FOLIE.—In such a case we advise you to consult a good physician in your city. We can send address of such, if desired, on receipt of stamped addressed envelope. In such an injury as that you have suffered, although there may be nothing very serious, yet a personal examination of your chest is necessary for judging of its exact condition.

LENA.—A Martin's Bandage should be applied to the leg and worn regularly. Write to Messrs. Krohne & Sesemann, Duke-street, London, W., for particulars regarding these bandages. Sit and rest with your feet elevated, and avoid constipation.

P. GRAY.—Read carefully the articles on the "Use of Glasses" in HEALTH, Nos. 165 and 166. These papers will give you all the information you desire. Visit or write to Mr. Browning, 63, Strand, W.C., who will accurately adjust glasses to your needs by aid of his measuring system.

SOL.—Use Quebascho Extract as an injection in cases of "internal inflammation," &c. This substance has a wonderful effect in cases like yours. Give it a fair trial, and follow out the instructions given in the advertisement, which gives the name of the proprietors. Internally, take fifteen drops Fer Bravais in water after your meals.

EARACHE.—A liniment of use in earache is composed of camphorated chloral, two and a half parts; pure glycerine, sixteen and a half parts; and oil of sweet almonds, ten parts. This is to be well mixed, and preserved in a well-stoppered bottle. The method of using it is as follows: A pledget of very soft cotton is soaked in the liniment, and then introduced as far as possible into the affected ear, two applications being made daily. Frictions behind the ear with the same liniment may be made once a day.

FRIDAY.—1. Change your diet habits; avoid tea and coffee, and substitute Grant's Oat Flour for these beverages at breakfast, &c. 2. Van Houten's Cocoa certainly.

MASSAGE AND ELECTRICAL TREATMENT.—Owing to the remarkable success which has attended this new form of treatment in the relief and cure of rheumatism, nervousness, liver and kidney diseases, ladies' ailments, &c., the Medical Battery Company (Limited) have fitted up a suite of rooms in the Electropathic Establishment, where patients can be treated daily by skilful male and female attendants, under the direct superintendence of the company's consulting physician. Members of the medical profession and others interested in the curative and strengthening powers of Electro-Massage are invited to call or write at once to the Medical Battery Company (Limited), 52, Oxford Street, London, W. (corner of Rathbone Place).

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